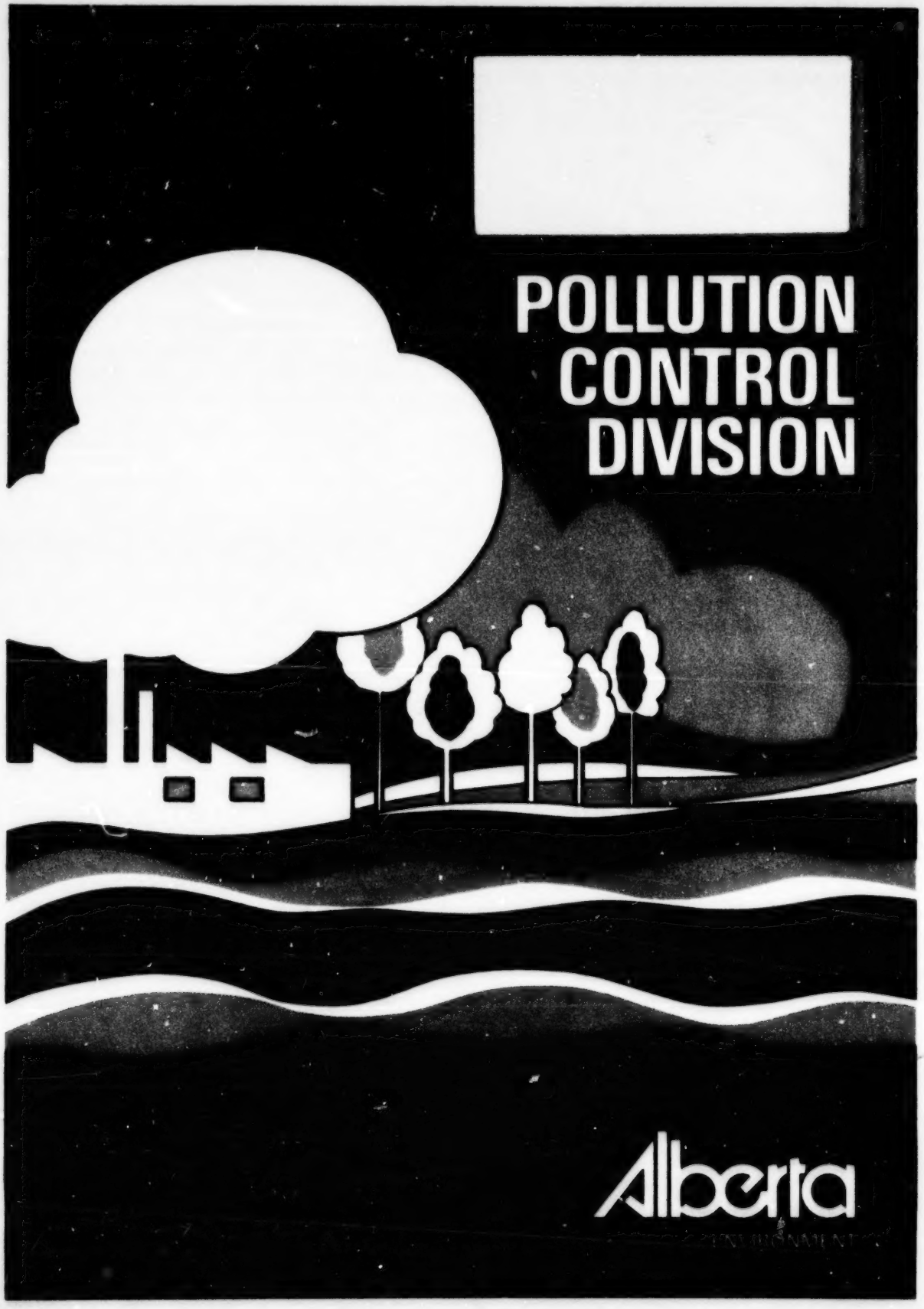
POLLUTION CONTROL DIVISION



Alberta

POLLUTION EMERGENCY RESPONSE TEAM (PERT) ACTIVITY REPORT

1982

POLLUTION CONTROL DIVISION

ALBERTA ENVIRONMENT

SUMMARY

In 1982, a total of 1,047 after-hours calls were received by the Pollution Emergency Response Team (PERT) via the Emergency/Complaint number (1-800-222-6514). This represents an increase of 63% over the 1981 total of 644 calls. The increase is due largely to 306 calls related to the October 17, 1982 Amoco sour gas well blowout near Lodgepole.

For the purpose of this report, calls have been grouped into six categories: AIR QUALITY, SPILLS, INDUSTRIAL CONTRAVENTIONS, INDUSTRIAL PROBLEMS, WILDLIFE and MISCELLANEOUS.

Public inquiries and complaints concerning AIR QUALITY comprised the greatest number of calls at 424 (40.5%).

INDUSTRIAL CONTRAVENTIONS reported to PERT increased from 40 calls in 1981 to 217 for 1982. Contravention reports (20.7%) are now the second most frequent category of calls to PERT.

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I INTRODUCTION AND BACKGROUND INFORMATION

The Pollution Emergency Response Team (PERT) was established in January 1980 to provide a response to after-hours emergency incidents and public inquiries received by the Pollution Control Division of Alberta Environment. Since the teams inception, the number of calls have increased.

1980 - 448 calls.

1981 - 664 calls.

1982 - 1,047 calls.

The five member PERT team consists of one senior technologist from each of the five Branches comprising the Pollution Control Division. The Branches are: WATER QUALITY CONTROL, AIR QUALITY CONTROL, PESTICIDE CHEMICALS, MUNICIPAL ENGINEERING and WASTE MANAGEMENT.

The team operates on a rotation basis, each member serving one week out of five.

Calls to the toll free Emergency/Complaint number are received initially by a telephone answering service. The caller is then transferred to the on-duty PERT member. Communication is maintained between the answering service and PERT by mobile phone, pager, and home telephone.

The on-duty member is provided with a specialized response vehicle equipped with personal protective equipment, spill and containment apparatus, air and water sampling kits and a library of reference materials.

II CATEGORY BREAKDOWN

(i) AIR QUALITY

Calls regarding odor, dust, smoke and noise regulated under the Clean Air Act are investigated by PERT. The majority of these calls are related to odor problems.

On-site investigation undertaken by PERT or a regional staff member requires identification of the most probable source of emmission. Once identified, actions are geared toward immediate correction.

As in past years, air quality complaints in 1982 comprised the greatest frequency of calls to PERT (Figure 1). The 1982 total of 424, an 83% increase over 1981 includes 235 complaints and inquiries regarding the Amoco well blowout (Table 1).

The variety of concerns reported to PERT by the public during the blowout incident were handled in the following manner:

- Callers reporting sour gas odors were provided an explanation of Alberta Environment's hydrogen sulfide (H_2S)/sulphur dioxide (SO_2) monitoring program and the most recent H_2S/SO_2 concentrations for their area.
- Callers reporting nausea and other medical symptoms were referred to their doctors.
- Inquiries concerning health effects were referred to the 24 hour number established by the Provincial Board of Health.

- Questions and suggestions concerning capping procedures, well site activities and requests to relocate were referred to the 24-hour numbers maintained by AMOCO and the Energy Resources Conservation Board (ERCB).

(ii) INDUSTRIAL CONTRAVENTIONS

Pursuant to the Clean Air and Clean Water Acts, licenced industries must report within 24 hours, any contravention of a term or condition of their licence to the Director of the Pollution Control Division.

Ambient and stack emissions for H_2S and SO_2 by the gas processing industry and stack emissions for dust (opacity) by the cement processing industry accounted for all contravention reports in 1982.

Gas Plants	SO_2 -	62
	H_2S -	36
Cement Plants	Opacity (Dust) -	119
TOTAL		217

The total of 217 industrial contravention reports (20.7%) represents an approximate 5-fold increase from 1980 and 1981 contraventions (Figure 1).

(iii) INDUSTRIAL PROBLEMS

Industrial operational problems likely to result in increased smoke emissions, excessive flaring or offensive odors must be reported to the Pollution Control Division by industry. These conditions often result in public inquiries and complaints.

Plant "start-ups" and "shutdowns", process upsets resulting in on-site spills or uncontrolled releases of gases or chemicals and progress reports during operational problems make up the majority of calls in this category.

A total of 111 reports were received by PERT from industry in 1982. This represents an increase of 23% over the 1981 total (Figure 1).

(iv) SPILLS

Spills of hazardous materials accounted for 74 calls to PERT in 1982 (7.1%). The following table lists the variety of materials spilled, classified according to the headings established by the United Nations, Transport of Dangerous Goods.

TABLE 2
HAZARDOUS MATERIAL SPILLS, 1982

GASES, COMPRESSED, LIQUIFIED

- Propane
- Methane
- Hydrogen Sulfide
- Methyl Mercaptan
- Anhydrous Ammonia
- Chlorine

FLAMMABLE LIQUIDS

- Gasoline
- Diesel Fuel
- Aviation Fuel
- Crude Oil
- Condensate
- Asphalt Oil
- Methanol
- Toluene
- Alcohol
- Paint

POISONS

- Avadex (pesticides)
- Mataven "
- 2-4D "
- Ethyl Dibromide

FLAMMABLE SOLIDS

- Sulphur

CORROSIVES

- Muriatic Acid
- Caustic Soda

OXIDIZING SUBSTANCES

- Hydrogen Peroxide

MISCELLANEOUS DANGEROUS SUBSTANCES

- Polychlorinated Biphenols
- Formaldehyde

RADIOACTIVE SUBSTANCES

- Iridium 192
- Gama-Ray Neutron Source

Most of the spills were a result of highway tanker truck overturns. The remaining incidents included pipeline ruptures, train derailments, underground storage tank leaks and small container breaks.

The majority of spill incidents required on-scene assistance by PERT or regional staff members of the Pollution Control Division. Information on the hazardous nature of materials involved and advice concerning containment, recovery and proper waste disposal was provided. In the event of a spill, a thorough clean-up followed by site reclamation is the primary requirement of the Pollution Control Division.

The Alberta Forest Service, Fish and Wildlife Division and the Energy Resources Conservation Board were frequently involved in spill clean-up procedures when resources under their administration were affected.

(v) WILDLIFE

Calls relating to wildlife sightings in urban areas were referred to the proper authority. A total of 31 calls (3%) were wildlife related.

(vi) MISCELLANEOUS

The 1982 total of 190 calls (18.1%) in this category includes the following:

(a) PERT helped maintain an "after office hours" information flow between many of the official participants of the Amoco well blowout incident. A total of 71 calls (Table 1) included:

(1) inter-departmental communications; and

(2) information referrals between the Pollution Control Division, Energy Resources Conservation Board (ERCB), Alberta Disaster Services (ADS), AMOCO, Public Health and media representatives.

(b) Calls relating to a variety of activities handled within the Pollution Control Division included pesticides handling information, reports of algal growth in surface waters and inquiries concerning municipal engineering projects.

(c) The remainder of miscellaneous calls were referrals to other divisions within Alberta Environment and other government departments.

III DISCUSSION

Calls to the Pollution Emergency Response Team have increased each year since the team's inception in January of 1980. An average of 20 calls per week were received in 1982, up from 9 calls/week in 1980 and 13 calls/week in 1981. Figure 1 (DISTRIBUTION OF PERT CALLS BY CATEGORY) shows that except for wildlife calls, each call category was represented in this increase.

The 1982 increase in AIR QUALITY and MISCELLANEOUS categories are due entirely to calls recieved concerning the Amoco well blowout.

The most significant change in the distribution of calls to PERT was a 5-fold increase in contravention reports by industry (FIGURE 1). Contravention reports increased from 40 calls in 1981 to 217 in 1982.

TABLE 1

1982 DISTRIBUTION OF PERT CALLS

CATEGORY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.		TOTALS	% OF TOTAL
AIR QUALITY	11	11	15	15	23	20	26	17	16	10 (75)	17 (146)	8 (14)	189 (235) 424	424	40.5
INDUSTRIAL CONTRAVENTIONS	7	7	8	12	17	21	30	23	18	27	27	20		217	20.7
MISCELLANEOUS	8	6	4	8	12	20	15	15	6	9 (41)	14 (25)	2 (5)	119 (71) 190	190	18.1
INDUSTRIAL PROBLEMS	14	3	23	17	9	8	11	10	6	6	1	3		111	10.6
SPILLS	4	5	8	10	6	9	9	9	3	3	3	5		74	7.1
WILDLIFE	--	--	--	1	8	5	3	4	4	3	3	--		31	3.0
TOTAL	44	32	58	63	75	83	94	78	53	174	236	57		1,047	100.0%

Numbers in brackets ( ) represent calls concerning the Amoco well blowout.

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FIGURE 1. DISTRIBUTION OF PERT CALLS BY CATEGORY 1980, 1981, 1982.

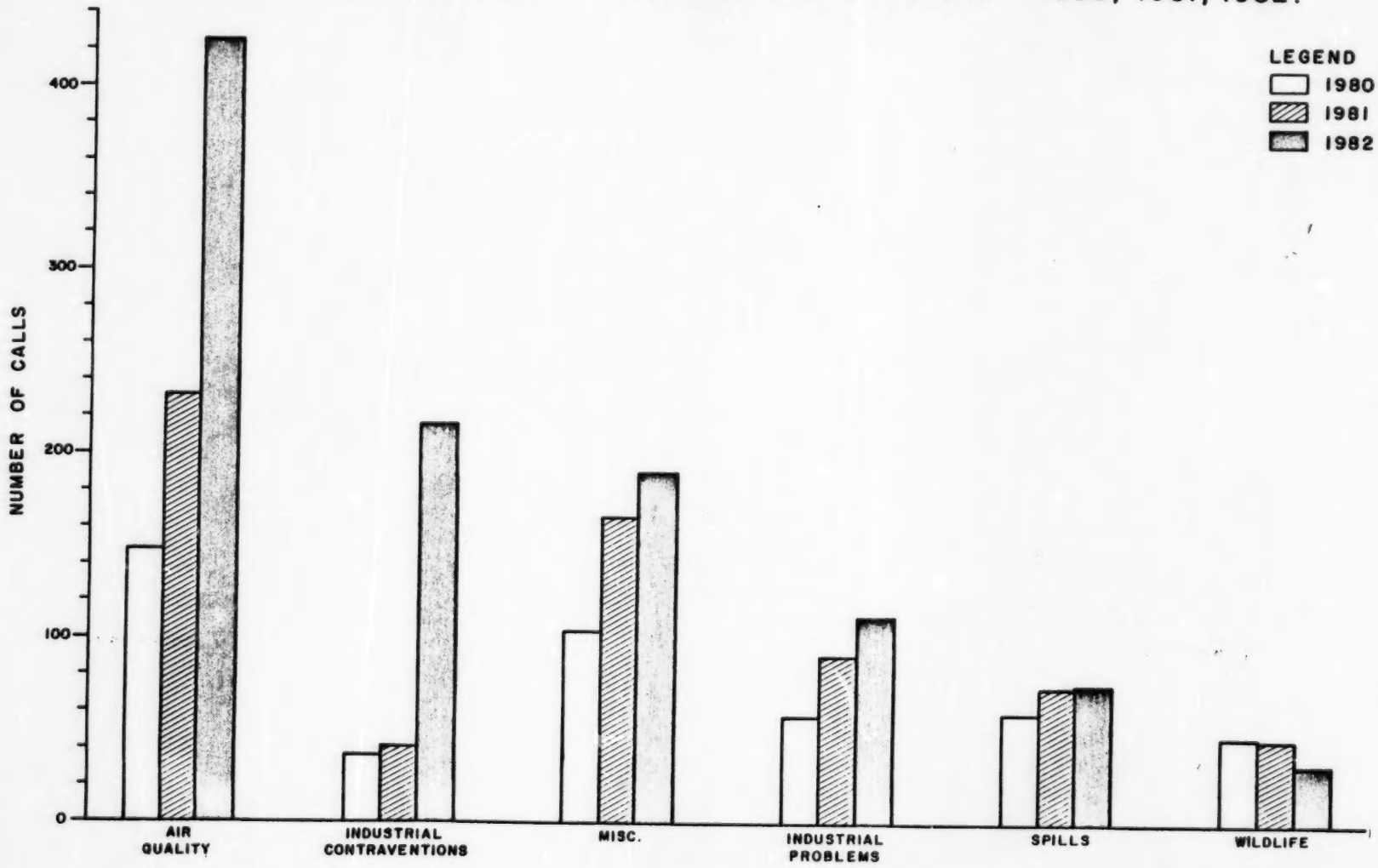

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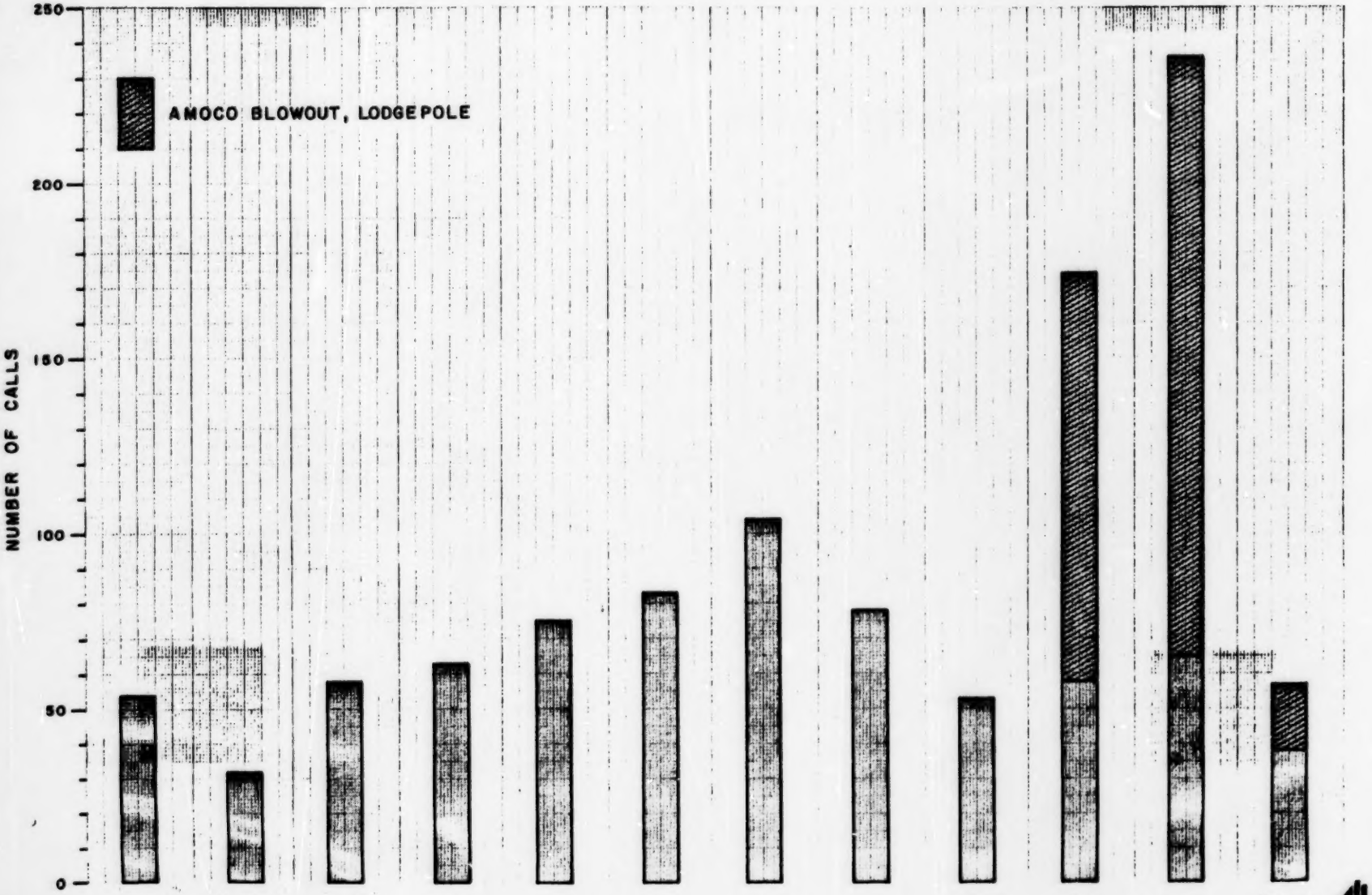
FIGURE 2. MONTHLY DISTRIBUTION OF PERT CALLS, 1982



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POOR

QUALITY

ORIGINAL